MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

GAF
1361 Alps Road
Wayne, NJ 07470

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: GAF Liberty™ SBS Self-Adhering Modified Bitumen Roofing Systems Over Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews and revises NOA No. 09-0518.05 and consists of pages 1 through 23.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	APP/SBS
Deck Type:	Concrete
Maximum Design Pressure:	-285 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Liberty™ SBS Self-Adhering Base/Ply Sheet	39.375" x 66'	ASTM D6163	Self-adhering, SBS modified, fiberglass reinforced membrane for base or ply sheet applications.
Liberty™ SBS Self-Adhering Cap Sheet	39.375" x 34'	ASTM D6164	Self-adhering, SBS modified, polyester / fiberglass composite reinforced cap sheet.
GAFGLAS® FlexPly™ 6	39.37" (1 meter) wide	ASTM D2178	Type VI asphalt impregnated glass felt with asphalt coating.
GAFGLAS® Ply 4	39.37" (1 meter) wide	ASTM D2178	Type IV asphalt impregnated glass felt with asphalt coating.
Ruberoid® SBS Heat-Weld™ Granule	39.37" (1 meter) wide	ASTM D6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
Ruberoid® SBS Heat-Weld™ Smooth	39.37" (1 meter) wide	ASTM D6164	Non-Woven Polyester mat coated with polymer modified asphalt and smooth surfaced.
Ruberoid® SBS Heat-Weld™ 170 FR	39.37" (1 meter) wide	ASTM D6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR	39.37" (1 meter) wide	ASTM D6164	Non-woven polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules with factory applied EnergyCote™.
Ruberoid® SBS Heat-Weld™ Plus	39.37" (1 meter) wide	ASTM D6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.

Product	Dimensions	Test Specification	Product Description
Ruberoid® SBS Heat-Weld™ Plus FR	39.37" (1 meter) wide	ASTM D6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
Ruberoid® SBS Heat-Weld™ 25	39.37" (1 meter) wide	ASTM D6163	Non-Woven Polyester mat coated with polymer modified asphalt and smooth surfaced.
Ruberoid® Torch Smooth	39.37" (1 meter) Wide	ASTM D6222	Non-Woven Polyester mat coated with APP modified asphalt and smooth surfaced.
Ruberoid® Torch Granule	39.37" (1 meter) Wide	ASTM D6222	Non-Woven Polyester mat coated with APP modified asphalt and surfaced with mineral granules.
Ruberoid® Torch FR	39.37" (1 meter) Wide	ASTM D6222	Non-Woven polyester mat coated with fire retardant polymer modified asphalt surfaced with mineral granules.
Ruberoid® Torch 180	39.37" (1 meter) Wide	ASTM D6222	Non-Woven Polyester mat coated with APP modified asphalt and surfaced with mineral granules.
Ruberoid® EnergyCap™ Torch Plus FR	39.37" (1 meter) Wide	ASTM D6222	APP modified cap membrane with a torch grade bottom surface and a mineral granular top surface coated with factory applied EnergyCote™.
Ruberoid® EnergyCap™ Torch Granule FR	39.37" (1 meter) Wide	ASTM D6222	APP modified cap membrane with a torch grade bottom surface and a mineral granular top surface coated with factory applied EnergyCote™.
GAFGLAS® Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules.
GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules and reflective EnergyCote™ coating.
Topcoat Elastomeric Roofing Membrane	1,5 or 55 gallons	ASTM D6083	An acrylic, water based elastomeric membrane system used to protect various types of roofing surfaces.

Product	Dimensions	Test Specification	Product Description
Topcoat® Surface Seal SB	5, 55 gallons	ASTM D6083	Solvent based sprayable thermoplastic rubber sealant used to protect and restore aged roof surfaces and to increase a roof's reflectivity.
Matrix™ 307 Premium Asphalt Primer	3, 5, 55 gallons	ASTM D41	Asphalt concrete primer used to promote adhesion of asphalt in built-up roofing.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
EnergyGuard™ PolyIso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RA Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ Polyiso RN Insulation	Polyisocyanurate foam insulation	GAF
DensDeck® Roof Board	Gypsum roof board	Georgia-Pacific Gypsum LLC
DensDeck® Prime® Roof Board	Gypsum roof board	Georgia-Pacific Gypsum LLC
DensDeck® DuraGuard® Roof Board	Gypsum roof board	Georgia-Pacific Gypsum LLC
Structodek® High Density Fiber Board Roof Insulation	High Density Fiber Board	Blue Ridge Fiber Board, Inc.
Securock® Gypsum-Fiber Roof Board	Gypsum roof board	United States Gypsum Corporation

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	N/A	N/A	N/A	N/A

EVIDENCE SUBMITTED:

Test Agency/Identifier	Report	Name	Date
UL LLC	R10689	UL 790	03/14/13
	R1306	UL 790	05/22/13
Exterior Research & Design, LLC	18035.12.02-2	TAS 114	12/24/02
	18034.03.03-2	ASTM D5147	04/23/03
	01501.04.03	TAS 114	04/03/03
	01881.09.03-2	TAS 114-D	09/09/03
Trinity | ERD	01881.11.03-2-RI	TAS 114-D	08/21/07
	G4280LAB.10.06	TAS 114-D	10/20/06
	G4280LAB.10.06-RI	TAS 114	12/06/06
	G6850.08.08-R1	ASTM D6164	04/14/11
	G6850.11.08	ASTM D6222	11/05/08
	G6850.10.08	ASTM D6222	10/06/08
	G6850.08.07-1	ASTM D3909	08/13/07
	G30250.02.10-3-R1	ASTM D3909	11/26/12
	G40620.07.12-2	ASTM D6222	07/17/12
	G12210.06.09	ASTM D6163	08/03/09
	G30250.02.10-2	ASTM D6222	05/11/10
	G34140.04.11-5	ASTM D4897	04/25/11
	G121110.12.08	ASTM D4601	12/02/08
	G34140.04.11-4	ASTM D4601	04/25/11
	G34140.04.11-2	ASTM D6163	04/25/11
	C8500SC.11.07	ASTM D6862	11/30/07
	G33470.01.11	ASTM D6164	01/13/11
	G31360.03.10	ASTM D6164	03/31/10
Factory Mutual Research Corp.	3024805	4470	11/20/06
	3029832	4470	05/11/07
Atlantic & Caribbean Roof Consulting	07-047	TAS 114-D	09/07/07
	07-032	TAS 114-D	05/10/07
PRI Construction Technologies LLC	ASTM D2178	GAF-314-02-01	08/23/11
	ASTM D2178	GAF-315-02-01	08/23/11
	ASTM D6083	GAF-084-02-01	05/07/06
	ASTM D6083	GAF-276-02-01REV	01/03/11

APPROVED ASSEMBLIES:

Membrane Type: SBS, Self-Adhered

Deck Type 3 : Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete

System Type A(1): All layers of insulation adhered to deck with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation Minimum 1.5″ thick	N/A	N/A
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck® Prime® Roof Board Minimum ¼″ thick	N/A	N/A

Note: Base Insulation Layer applied in OlyBond® at 1 gal/sq. full coverage or OlyBond 500® in $^3/_4$″ to 1″ wide ribbons spaced 12″ o.c. Top Insulation Layer applied in OlyBond® at 1 gal/sq. full coverage or OlyBond 500® in $^3/_4$″ to 1″ wide ribbons spaced 12" o.c.

Base Sheet: One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Membrane: One layer of Liberty™ SBS SA Cap self-adhered to the base sheet, according to manufacturer's application instructions

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: - 152.5 psf (See General Limitation #9)

Membrane Type: SBS, Self-Adhered

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(2): All layers of insulation are adhered to the deck with approved adhesive. Membrane is subsequently fully adhered.

All General and System Limitations shall apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Structodek® High Density Fiber Board Roof Insulation Minimum ½" thick	**N/A**	**N/A**

All insulation shall be adhered to the deck with OlyBond 500® adhesive applied in continuous ¾" to1" wide beads at a maximum spacing of 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Membrane: One or more layers of Liberty™ SBS Self-Adhering Cap Sheet applied to the base sheet according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -110 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(3): All layers of insulation are adhered to the deck with approved adhesive. Membrane is subsequently fully adhered.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck® Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered to the deck with OlyBond 500® adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® SBS Heat-Weld™ Smooth, applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -122.5 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(4): All layers of insulation adhered to deck with approved adhesive. Membrane is subsequently fully adhered.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Securock® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered to the deck with OlyBond 500® adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® SBS Heat-Weld™ Smooth, applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR Ruberoid® SBS Heat-Weld™ Plus FR, or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR applied according to Manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -270 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(5): All layers of insulation adhered to deck with approved adhesive. Membrane is subsequently fully adhered.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck® Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered to the deck with OlyBond 500® adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation shall be primed with ASTM D-41 Asphalt Primer and allowed to dry prior to application of base sheet.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® SBS Heat-Weld™ Smooth applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -167.5 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(6): All layers of insulation adhered to deck with approved adhesive. Membrane is subsequently fully adhered.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Securock® Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered to the deck with OlyBond 500® adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation shall be primed with ASTM D-41 Asphalt Primer and allowed to dry prior to application of base sheet.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® SBS Heat-Weld™ Smooth, applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -285 psf (See General Limitation #9)

Membrane Type: SBS, Self-Adhered

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(7): Optional Vapor Retarder is torch adhered to the deck. All layers of insulation adhered to deck or Vapor Retarder. Membrane is subsequently fully adhered.

Vapor Retarder: (Optional) One ply of Ruberoid® Torch Smooth or Ruberoid® SBS Heat-Weld™ Smooth, torch adhered to the new deck.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be adhered to the deck or optional vapor retarder with OlyBond 500® insulation adhesive in ¾" to 1" beads wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied according to manufacturer's application instructions.

Membrane: One layer of Liberty™ SBS Self-Adhering Cap Sheet applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -120 psf (See General Limitation #9)

Membrane Type: SBS, Self-Adhered

Deck Type 3I: Primed Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(8): (Optional) Vapor Retarder is fully adhered to the deck. All layers of insulation adhered to deck or Vapor Retarder with hot asphalt. Membrane is subsequently fully adhered.

Vapor Retarder: (Optional) One or two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 adhered to the primed deck with hot asphalt applied at 20-25 lbs./sq.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® DuraGuard® Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Insulation shall be adhered to the primed deck or optional vapor retarder with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied according to manufacturer's application instructions.

Membrane: One layer of Liberty™ SBS Self-Adhering Cap Sheet applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -127.5 psf (See General Limitation #9)

Membrane Type: SBS, Self-Adhered

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(9): Optional Vapor Retarder is torch adhered to the deck. All layers of insulation adhered to deck or Vapor Retarder. Membrane is subsequently fully adhered.

Vapor Retarder: (Optional) One ply of Ruberoid® Torch Smooth or Ruberoid® SBS Heat-Weld™ Smooth, torch adhered to the new deck.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® DuraGuard® Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Insulation shall be adhered to the deck or optional vapor retarder with OlyBond 500® insulation adhesive in ¾" to 1" beads wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied according to manufacturer's application instructions.

Membrane: One layer of Liberty™ SBS Self-Adhering Cap Sheet applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -120 psf (See General Limitation #9)

Membrane Type: APP/SBS Heat-Weld

Deck Type 3I: Primed Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(10): Optional Vapor Retarder is fully adhered to the deck. All layers of insulation adhered to deck or Vapor Retarder with hot asphalt. Membrane is subsequently fully adhered.

Vapor Retarder: (Optional) One or two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 adhered to the primed deck with hot asphalt applied at 20-25 lbs./sq.

Insulation Layer: **See Insulation Maximum Design Pressure Table A below. Design Pressure is dependent upon Insulation Option used in this system.**

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR, Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® Torch Smooth, Ruberoid® Torch Granule, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch 180, Ruberoid® Torch FR or Ruberoid® EnergyCap™ Torch Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Insulation Maximum Design Pressure Table A	
Insulation Layer Options:	
1.	Min. 1.5" EnergyGuard™ RA Polyiso Insulation mopped in asphalt at the rate of 20-25 lbs./sq.
	Maximum Design Pressure –217.5 psf (See General Limitation #9)
2.	Min. 1.5" EnergyGuard™ RN Polyiso Insulation mopped in asphalt at the rate of 20-25 lbs./sq.
	Maximum Design Pressure –210 psf (See General Limitation #9)
3.	Min. 1.5" EnergyGuard™ Polyiso Insulation mopped in asphalt at the rate of 20-25 lbs./sq.
	Maximum Design Pressure –172.5 psf (See General Limitation #9)

Membrane Type: APP/SBS Heat-Weld

Deck Type 3I: Primed Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(11): Optional Vapor Retarder is fully adhered to the deck. All layers of insulation adhered to deck or Vapor Retarder with hot asphalt. Membrane is subsequently fully adhered.

Vapor Retarder: (Optional) One or two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 adhered to the primed deck with hot asphalt applied at 20-25 lbs./sq.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck® DuraGuard® Roof Board		
Minimum 1/4" thick	**N/A**	**N/A**

Note: All Insulation shall be mopped in asphalt at the rate of 20-25 lbs./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR, Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® Torch Smooth, Ruberoid® Torch Granule, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch 180, Ruberoid® Torch FR or Ruberoid® EnergyCap™ Torch Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -127.5 psf (See General Limitation #9)

Membrane Type: APP/SBS Heat-Weld

Deck Type 3I: Primed Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(12): Optional Vapor Retarder is torch adhered to the deck. All layers of insulation adhered to deck or Vapor Retarder with approved adhesive. Membrane is subsequently fully adhered.

Vapor Retarder: (Optional) One ply of Ruberoid® Torch Smooth or Ruberoid® SBS Heat-Weld™ Smooth, torch adhered to the new deck.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck® DuraGuard® Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: All Insulation shall be adhered with OlyBond500® Adhesive in ¾" to 1" beads spaced at 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR, Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® Torch Smooth, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch Granule, Ruberoid® Torch 180, Ruberoid® Torch FR or Ruberoid® EnergyCap™ Torch Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -120 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(13): All layers of insulation are adhered to the deck with approved adhesive. Membrane is subsequently fully adhered.

All General and System Limitations shall apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Securock® Gypsum-Fiber Roof Board Minimum ¼" thick	**N/A**	**N/A**

Note: Insulation shall be adhered to the deck with OlyBond® 500 adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR or Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -270 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(14): All layers of insulation are adhered to the deck with approved adhesive. Membrane is subsequently fully adhered.

All General and System Limitations shall apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® Roof Board Minimum ¼" thick	**N/A**	**N/A**

Note: Insulation shall be adhered to the deck with OlyBond® 500 adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation shall be primed with ASTM D-41 Asphalt Primer and allowed to dry prior to application of base sheet.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR or Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -167.5 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(15): All layers of insulation are adhered to the deck with approved adhesive. Membrane is subsequently fully adhered

All General and System Limitations shall apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® Roof Board Minimum ¼" thick	N/A	N/A

Note: Insulation shall be adhered to the deck with OlyBond® 500 adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the insulation according to manufacturer's application instructions with a minimum 4" lap.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR or Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -122.5 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld, Self-Adhered

Deck Type 3: Concrete Decks, Non-insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(1): Membrane and/or anchor sheet is adhered to primed deck.

All General and System Limitations shall apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the primed deck applied according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: (Optional) One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet, applied according to manufacturer's application instructions.

Membrane: One layer of Liberty™ SBS Self-Adhering Cap Sheet self-adhered applied according to manufacturer's application instructions.
Or
One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR, or Ruberoid® SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -125 psf (See General Limitation #9)

Membrane Type: SBS Heat-Weld

Deck Type 3I: Concrete Decks, Non Insulated

Deck Description: 2500 psi structural concrete

System Type F(2): Membrane and/or anchor sheet is adhered to primed deck.

All General and System Limitations shall apply.

Primer: ASTM D 41 (Matrix™ 307) asphalt primer applied 1 gallon per square

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet applied to the primed deck according to manufacturer's application instructions with a minimum 4" lap.

Ply Sheet: One or more layers of Liberty™ SBS Self-Adhering Base/Ply Sheet applied according to manufacturer's application instructions.

Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR, or Ruberoid® SBS Heat-Weld™ Plus FR applied according to manufacturer's application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Elastomeric Roofing Membrane or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: - 125 psf (See General Limitation #9)

CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE